

Appln No. 09/825,903

Amdt date January 13, 2005

Reply to Office action of September 28, 2004

**Amendments to the Drawings:**

The attached sheets of drawings in the appendix hereto include changes to Fig. 59 and Fig. 80. These sheets, which include Fig. 59 and Fig. 80, replace the original sheets including Fig. 59 and Fig. 80.

Attachment: Replacement Sheets

Annotated Sheets Showing Changes

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**REMARKS/ARGUMENTS**

The above identified patent application has been amended and reconsideration and reexamination are hereby requested.

Claims 1 - 7 and 10 - 13 are now in the application. Claims 1 - 5 and 7 have been amended. Claims 8 and 9 have been cancelled. Claims 10 - 13 have been added.

The Examiner has objected to the Drawings under 37 C.F.R. § 1.83(a) as failing to show every feature specified in the claims. In particular, the Examiner has objected to the steps of "delaying," "multiplying," and "comparing" in lines 14 - 21 of Claim 1, as well as in lines 23 - 34 of Claim 9, and the further steps of "multiplying," and "comparing" in lines 26 - 31 of Claim 1, as well as in lines 39 - 48 of Claim 9, as not being shown in the Drawings. The Examiner has furthermore objected to the "plurality of log operands" featured in Claims 8 and 9 as not being shown in the figures.

Regarding the "multiplying" steps, Claim 1 has been amended and does not now claim "multiplying" steps. Claim 9 has been cancelled.

Regarding the step of "delaying," Fig. 59 shows three delay functions 3040, 3042, 3044 (3033, 3035, 3037 after amendment), also described on page 92 in lines 5 - 15 of the specification. The step of "delaying" claimed in Claim 1, lines 14 - 15, is reflected in delay function 3040 (3033 after amendment). Claim 9 has been cancelled.

Regarding the steps of "comparing," Fig. 59 shows two compare functions 3036, 3038, also described on page 91, line 32 through page 92, line 19. The step of "comparing" in Claim 1,

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lines 19 - 21, is reflected in compare function 3036. The step of "comparing" in Claim 1, lines 29 - 31, is reflected in compare function 3038. Claim 9 has been cancelled.

Regarding the "plurality of log operands" featured in Claims 8 and 9, both Claims have been cancelled.

The Examiner has objected to the specification because of certain informalities. The specification has been amended to correct the informalities, following the Examiner's suggestions. The amendments include a shortening of the Abstract of the Disclosure to 147 words to comply with the 150-word-limit.

The Examiner has objected to the claims because of certain informalities. The claims have been amended to correct the informalities, following the Examiner's suggestions.

The Examiner has rejected Claims 2, 8 and 9 under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement.

With regard to Claim 2, the Examiner has suggested that "the detailed description does not describe a low pass filter using filter coefficients to the preamble symbol sequence" but rather discloses a "matched filter." Claim 2 has been amended to simply claim "filtering."

The Examiner further noted that "the detailed description does not describe a circuit wherein a filter averages a squared magnitude . . . to determine a correlation sequence and then computes a squared-magnitude of the correlation sequence and low-pass filters the computed squared magnitude" and that "the averaging or low-pass filtering of the squared magnitude is performed only once by reference number 3018, 3020 and 3022."

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The Examiner therefore suggests to delete the portion "and averaging a squared-magnitude of the filtered received signal."

However, Claim 2 accurately claims "averaging a squared-magnitude of the filtered received signal." Use of a matched filter with averaging is disclosed on page 88 in line 31. Furthermore, "averaging" is not claimed anywhere else in Claim 2 or anywhere in Claim 1, upon which Claim 2 depends, and would therefore not be claimed at all if the portion "and averaging a squared-magnitude of the filtered received signal" were deleted, even if averaging is only performed once.

With regard to Claims 8 and 9, both Claims have been cancelled.

The Examiner has rejected Claims 1 - 9 under 35 U.S.C. § 112, second paragraph, "as being indefinite for failing to particularly point out and distinctly claim the subject matter [of the] invention."

With regard to Claim 1, the Examiner finds it "unclear how 'comparing detected energy . . . to provide a threshold compared energy signal'" in lines 24 - 25 relates to the detecting step in lines 22 - 24. Claim 1 has been amended and does not now claim "comparing detected energy . . . ."

The Examiner furthermore finds lack of antecedent basis for the terms "the threshold compared low-pass filtered correlation signal" and "the threshold compared multiplied energy signal" in the multiplying step in lines 29 - 31 of Claim 1. As the Applicant has deleted the multiplying step, this rejection becomes moot.

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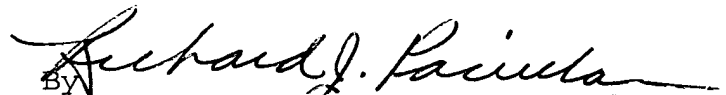
With regard to Claim 2, the Examiner finds unclear whether the result of the filtering step is a "correlation sequence" or a "filtered received signal." Claim 2 has been amended to reflect that the result of the filtering step is a "correlation sequence."

Claim 9 has been cancelled.

Accordingly, in view of the above amendments and remarks it is submitted that all of the Examiner's objections and rejections have been overcome. Reconsideration and reexamination of the above Application is requested.

Respectfully submitted,

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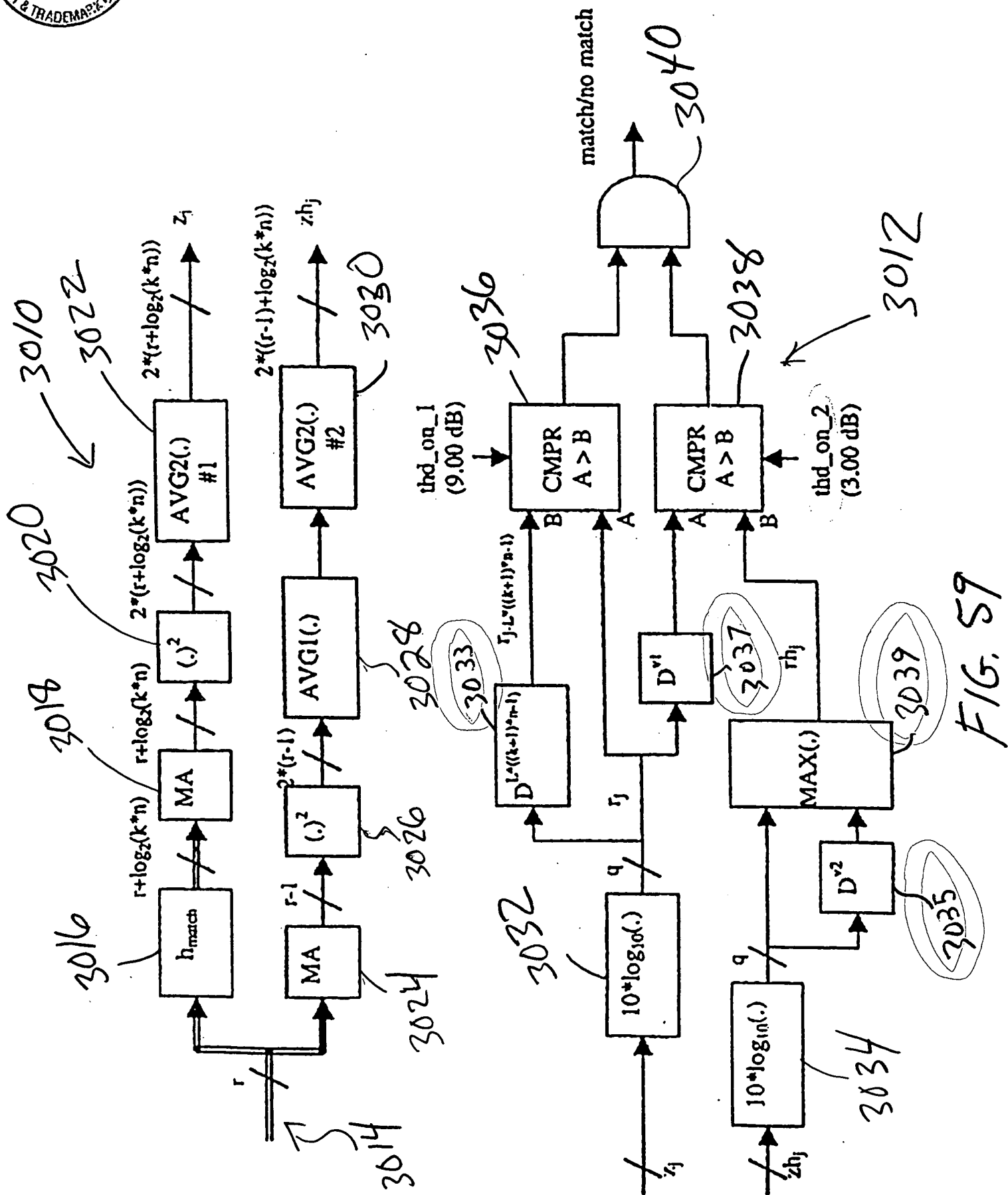


FIG. 59

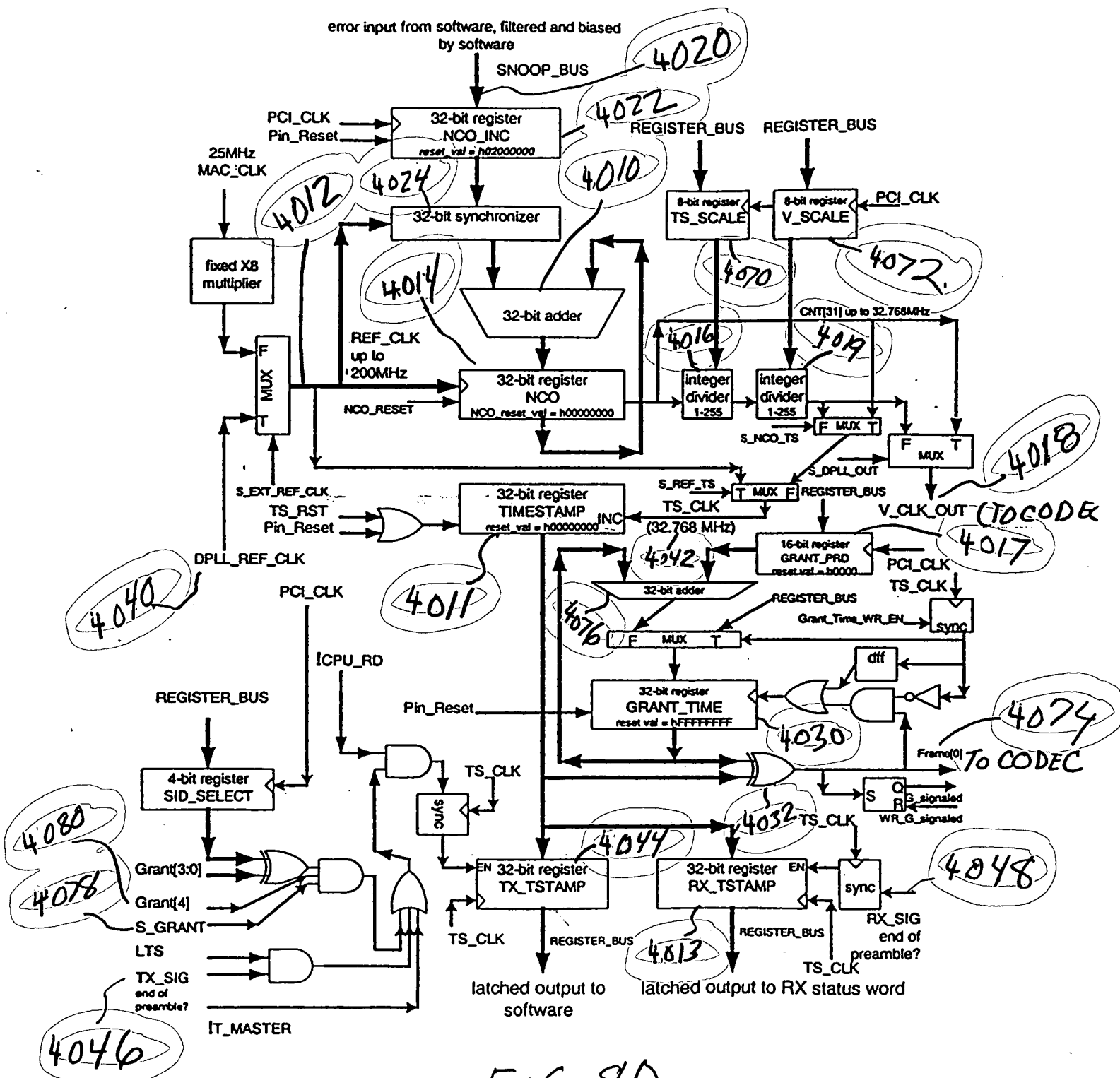


FIG. 80